AMENDMENTS TO THE CLAIMS

1–27. (Cancelled).

28. (Currently Amended) A method for expressing a ~~mature~~ modified enzyme in a tobacco plant plastid comprising:

(a) introducing into the plastome of a tobacco plant a chimeric gene comprising:

(1) a modified DNA molecule ~~that encodinges~~ a modified ~~mature~~ enzyme having protoporphyrinogen oxidase (protox) activity that is normally targeted to a plant plastid by a plastid transit peptide, wherein said modified DNA molecule is modified such that a coding sequence of the plastid transit peptide is absent from said modified DNA molecule, ~~and~~ wherein said modified ~~mature~~ enzyme has at least one amino acid ~~substitution~~ modification compared to a naturally occurring protox enzyme, ~~that occurs~~ wherein said at least one amino acid modification confers resistance to an inhibitor of the naturally occurring protox enzyme, and wherein said at least one amino acid modification comprises an amino acid substitution occurring at a position corresponding to position 221, 226, 227, 369, 371, 432, 436, 481, or 517 of SEQ ID NO: 12 ~~as set forth~~ in the comparative alignment shown in Table 1~~, wherein said at least one amino acid substitution confers resistance to an inhibitor of said naturally occurring protox enzyme~~; and

(2) a promoter capable of expressing said modified DNA molecule in a plastid, wherein said promoter is operatively linked to said modified DNA molecule,

(b) expressing said modified DNA molecule in a plastid of said plant, wherein said mature enzyme is produced in said plastid.

29. (Currently Amended) The method according to claim 28, wherein said ~~mature~~ modified enzyme is normally inhibited by a herbicidal compound.

30–33. (Cancelled)

34. (Currently Amended) The method according to claim 29, wherein said ~~mature~~ modified enzyme produced in said plastid confers upon said plant tolerance to the herbicidal compound in an amount that inhibits growth of an untransformed plant.

35. (Currently Amended) A method for expressing a ~~mature~~ modified enzyme in a tobacco plant plastid comprising:

(a) introducing into the plastome of a tobacco plant a chimeric gene comprising:

(1) a modified DNA molecule ~~that~~ encoding~~es~~ a modified polypeptide comprising:

(i) a modified, non-functional plastid transit peptide, wherein said modified, non-functional transit peptide is not competent for import in a plastid, and

(ii) a ~~mature~~ modified enzyme having protoporphyrinogen oxidase (protox) activity that is normally targeted to a plant plastid by a functional plastid transit peptide, ~~and~~ wherein said ~~mature~~ modified enzyme has at least one amino acid ~~substitution~~ modification compared to a naturally occurring protox enzyme, wherein said at least one amino acid modification confers resistance to an inhibitor of the naturally occurring protox enzyme, ~~that occurs~~ and wherein said at least one amino acid modification comprises an amino acid substitution occurring at a position corresponding to position 221, 226, 227, 369, 371, 432, 436, 481, or 517 of SEQ ID NO: 12 ~~as set forth~~ in the comparative alignment shown in Table 1, ~~wherein said at least one amino acid substitution confers resistance to an inhibitor of said naturally occurring protox enzyme~~; and

(2) a promoter capable of expressing said modified DNA molecule in a plastid, wherein said promoter is operatively linked to said modified DNA molecule,

(b) expressing said modified DNA molecule in a plastid of said plant, wherein said polypeptide is produced in said plastid.

36. (Currently Amended) The method according to claim 35, wherein said ~~mature~~ modified enzyme is normally inhibited by a herbicidal compound.

37–40. (Cancelled)

41. (Previously presented) The method according to claim 36, wherein said polypeptide confers upon said plant tolerance to the herbicidal compound in an amount that inhibits growth of an untransformed plant.

42. (Withdrawn) The method according to claim 29, wherein an alanine occurring the position corresponding to position 226 of SEQ ID NO: 12 is replaced with valine, threonine, leucine, cysteine, or isoleucine.

43. (Previously presented) The method according to claim 29, wherein an alanine occurring at the position corresponding to position 226 of SEQ ID NO: 12 is replaced with valine, threonine, leucine, cysteine, or isoleucine.

44. (Withdrawn) The method according to claim 29, wherein a glycine occurring at the position corresponding to position 227 of SEQ ID NO: 12 is replaced with serine or leucine.

45. (Withdrawn) The method according to claim 29, wherein a proline occurring at the position corresponding to position 369 of SEQ ID NO: 12 is replaced with serine or histidine.

46. (Withdrawn) The method according to claim 29, wherein a valine occurring at the position corresponding to position 371 of SEQ ID NO: 12 is replaced with leucine.

47. (Withdrawn) The method according to claim 29, wherein a tyrosine occurring at the position corresponding to position 432 of SEQ ID NO: 12 is replaced with cysteine, isoleucine, leucine, threonine, methionine, valine, alanine, or arginine.

48. (Withdrawn) The method according to claim 29, wherein an alanine occurring at the position corresponding to position 436 of SEQ ID NO: 12 is replaced with proline.

49. (Withdrawn) The method according to claim 29, wherein a isoleucine occurring at the position corresponding to position 481 of SEQ ID NO: 12 is replaced with threonine, histidine, glycine, or asparagine.

50. (Withdrawn) The method according to claim 29, wherein a valine occurring at the position corresponding to position 517 of SEQ ID NO: 12 is replaced with alanine.

51. (Withdrawn) The method according to claim 36, wherein a cysteine occurring at the position corresponding to position 221 of SEQ ID NO: 12 is replaced with phenylalanine, leucine, or lysine.

52. (Previously presented) The method according to claim 36, wherein an alanine occurring at the position corresponding to position 226 of SEQ ID NO: 12 is replaced with valine, threonine, leucine, cysteine, or isoleucine.

53. (Withdrawn) The method according to claim 36, wherein a glycine occurring at the position corresponding to position 227 of SEQ ID NO: 12 is replaced with serine or leucine.

54. (Withdrawn) The method according to claim 36, wherein a proline occurring at the position corresponding to position 369 of SEQ ID NO: 12 is replaced with serine or histidine.

55. (Withdrawn) The method according to claim 36, wherein a valine occurring at the position corresponding to position 371 of SEQ ID NO: 12 is replaced with leucine.

56. (Withdrawn) The method according to claim 36, wherein a tyrosine occurring at the position corresponding to position 432 of SEQ ID NO: 12 is replaced with cysteine, isoleucine, leucine, threonine, methionine, valine, alanine, or arginine.

57. (Withdrawn) The method according to claim 36, wherein an alanine occurring at the position corresponding to position 436 of SEQ ID NO: 12 is replaced with proline.

58. (Withdrawn) The method according to claim 36, wherein a isoleucine occurring at the position corresponding to position 481 of SEQ ID NO: 12 is replaced with threonine, histidine, glycine, or asparagine.

59. (Withdrawn) The method according to claim 36, wherein a valine occurring at the position corresponding to position 517 of SEQ ID NO: 12 is replaced with alanine.